CHARACTERISTICS AND SYNCHRONISATION OF REAL BUSINESS CYCLES IN SELECTED SUB-SAHARAN AFRICAN COUNTRIES

BY

AMU BARNABAS IMOUKHEDE

16PAF01379

BEING

A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ECONOMICS AND DEVELOPMENT STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ECONOMICS

COLLEGE OF BUSINESS AND SOCIAL SCIENCES,

COVENANT UNIVERSITY, OTA, OGUN STATE, NIGERIA.

2018

DECLARATION

I, AMU Barnabas Imoukhede hereby declare that this dissertation is my original work and that no portion of this work has been or will be submitted in support of an application for another degree or qualification of this or any other Universities or other institution of learning.

AMU Barnabas Imoukhede

Signature and Date

CERTIFICATION

This is to certify that this research work, written by AMU Barnabas Imoukhede was supervised and approved in partial fulfilment of the requirements for the award of Master of Science (M.Sc.) Degree in Economics from the Department of Economics and Development Studies, Covenant University, Ota, Ogun State, Nigeria.

Date

Signature and

Prof. Evans OSABUOHIEN

(Head of Department) Date

Signature and

Dr Simeon O. AKINLEYE

.....

(External Examiner) Date Signature and

Prof. Sam WARA

(Dean, School of Postgraduate Studies) Date Signature and

DEDICATION

I dedicate this research work to the Almighty God, the alpha and the omega, for the grace to complete my M.Sc. programme at Covenant University, Ota, Ogun State, Nigeria.

I would also like to dedicate this work to my beloved parents Mr and Mrs Amu for their love and support throughout my educational pursuit and for always being there for me with kind words and provisions.

ACKNOWLEDGEMENT

I want to express my exceeding gratitude to the Almighty God for the grace and strength to complete this research work despite all my limitations and shortcomings. He alone deserves all the praise for the provision of all my needs and the wisdom to go about this project. To the Chancellor of Covenant University, Dr. David O. Oyedepo, I say thank you for your words that have inspired me repeatedly, to change my world and add value to it.

I thank the entire management of Covenant University, most especially the Vice Chancellor in particular, Prof. AAA. Atayero and the Registrar Dr Olumuyiwa Oludayo for providing an enabling environment that has made it possible for the timely completion of my Masters of Science programme.

I also want to express my profound gratitude to my Supervisor, Prof. Evans Osabuohien for his patience, time, corrections and suggestions to the entire work that has brought about the realisation of this thesis. I am sincerely grateful and I appreciate all your efforts and concern.

My gratitude also goes to my Departmental lecturers that have supported me immensely in one way or the other without even knowing Prof. Philip Alege Prof. Olurinola, Dr. Okodua, Dr. Ogundipe, Dr. Odebiyi, Dr. Oduntan. I also want to use this medium to thank the Head of Department, Prof. Evans Osabuohien, for his advice, support and constant push for the timely completion of this research work. I thank you all and pray that your heart desires are granted.

To my parents, Mr. & Mrs. Amu, words cannot express my love for you and I use this medium to say that I love and thank you so much for your investment into my life and pray that you will both live to see that investment turn into an amazing Testimony. I say thank you to my wonderful sibling and nieces Helen Ujah, Isabel Ujah and Olivia-Pearl Ujah. Finally I would like to appreciate my friends who have helped me in towards the completion of this research work Omobola Adu, Jeremiah, Senibi Victoria, Akinyimika Sowunmi, Oghenetega Otobo and all others who are too numerous to mention.

AMU Barnabas Imoukhede

2018

LIST OF TABLES

Table 3.1 Growth Rate of Real GDP	32
Table 3.2 Growth Rate of government Final Consumption Expenditure	36
Table 3.3 Inflation Rate	
Table 3.4 Growth Rate of Household final Consumption Expenditure	44
Table 4.1 Variables Employed. Description, Source and Measurements	64
Table 5.1(a) Cyclical Behaviour of Real GDP and its Main Components	69
Table 5.1(b) Cyclical Behaviour of Real GDP and its Main Components	70
Table 5.1(c) Cyclical Behaviour of Real GDP and its Main Components	71

Table 5.2 Business Cycle Synchronisation across Sub-Saharan Africa	73
Table 5.3 AR Roots Table for Selected Sub-Saharan African Countires after First	
Difference	79
Table 5.4 Impulse Response of Macroeconomic Variables to Real Shocks in Sub-	
Saharan Africa	83
Table 5.4 Variance Decomposition of Real Shocks in Sub-Saharan Africa	85

LIST OF FIGURES

Figure 2.1	The Phases of the Business Cycle	.11
Figure 3.1	Trends of Real GDP	.31
Figure 3.2	Trends of Government Final Concumption Expenditure	.35
Figure 3.3	Bar Chart of Inflation Rate	.38
Figure 3.4	Bar Chart of Gross Fixed Capital Formation	.41

Figure 3.5	Bar Chart of Household Final Consumption Expenditure	43
Figure 3.6	Bar Chart of Volume of Imports	47
Figure 3.7	Bar Chart of Volume of Exports	48
Figure 3.8	Trend of Terms of Trade Adjustments	49
Figure 5.1	Cyclical Components of GDP for Botswana	75
Figure 5.2	Cyclical Components of GDP for Burundi	75
Figure 5.3	Cyclical Components of GDP for Kenya	75
Figure 5.4	Cyclical Components of GDP for Liberia	75
Figure 5.5	Cyclical Components of GDP for Malawi	75
Figure 5.6	Cyclical Component of GDP for Mauritius	75
Figure 5.7	Cyclical Component of GDP for Mozambique	76
Figure 5.8	Cyclical Component of GDP for Namibia	76
Figure 5.9	Cyclical Component of GDP for Nigeria	76
Figure 5.10	Cyclical Component of GDP for Rwanda	76
Figure 5.11	Cyclical Component of GDP for Sierra Leone	76
Figure 5.12	Cyclical Component of GDP for South Africa	76
Figure 5.13	Cyclical Component of GDP for Swaziland	77
Figure 5.14	Cyclical Component of GDP for Tanzania	77
Figure 5.15	Cyclical Component of GDP for Uganda	77
Figure 5.16	Impulse Response of Macroeconomic Variables to Real Shocks	82

LIST OF ACRONYMS

1. AD - Aggregate Demand

- 2. AR Autoregressive Roots
- 3. B-PVAR Bayesian Panel Autoregressive
- 4. CBN Central Bank of Nigeria
- 5. GDP Gross Domestic Product
- 6. HP Filter Hodrick-Prescott Filter
- 7. IMF International Monetary Fund
- 8. IRFs Impulse Response Functions
- 9. NBS National Bureau of Statistics
- 10. NKS New Keynesian School
- 11. RBC Real Business Cycle
- 12. RE Rational Expectation
- 13. SAP Structural Adjustment Programme
- 14. SSA Sub-Saharan Africa
- 15. SAS Shortrun Aggregate Supply
- 16. VD Variance Decomposition

ABSTRACT

The 2007/2008 global financial crisis and the 2016/2017 economic recession experienced in Nigeria, highlights the need for an extensive business cycle fluctuation research. This study examines business cycle fluctuations in selected Sub-Saharan African (SSA) countries with three major objectives namely, to: establish and characterise business cycles in SSA; observe if a form of business cycle synchronisation exists across SSA countries; measure the impact of some selected real shocks in SSA. To achieve the first objective, the Hodrick-Prescott filter was utilised to establish the existence of business cycles in SSA as well as the cyclical characteristics. The results indicate that business cycles exist in SSA. The cyclical characteristics are also described using the Hodrick-Prescott filter. The pair-wise correlation matrix was utilised in investigating the existence of business cycle synchronisation in SSA. It is discovered that business cycle synchronisation exists in SSA; the degree of synchronisation, however, varies across different countries. The impact of some selected real shocks in SSA was measured using a Bayesian Panel Vector Autoregression model. It was ascertained from the results that real shocks indeed drive business cycles in SSA. The existence of strong procyclicality between Government spending and Real GDP, indicates the strong influence of government spending on macroeconomic fluctuations. Therefore, the study recommends that government and its institutions should carry out a proper fiscal policy plan alongside monetary policy in order to stabilise the economy in recessions and expansions. Furthermore, the study highlights the need for diversification of the export base of most SSA countries from agricultural raw materials to consumer goods.